

TECHNICAL MEMORANDUM

Utah Coal Regulatory Program

April 7, 2009

TO: Internal File

THRU: Jim Smith, Permit Supervisor, Hydrologist, Team Lead *DS 11/23/09*

FROM: Priscilla Burton, Certified Professional Soil Scientist *pub by SOS*

RE: Phase I Bond Release for Remaining Reclaimed Areas [Sediment Pond],
PacifiCorp, Des-Bee-Dove Mine, C/015/0017, Task ID #3221

SUMMARY:

The Division received a request for Phase I bond release of the Des Bee Dove sediment pond area on September 2, 2008. A site visit was conducted on December 3, 2008. In response to deficiencies written under Task 3043, a letter of explanation was received on February 18, 2009 that describes the field changes to the reclamation plan described in the MRP. There were no changes made to the MRP and no C1C2 form accompanied the letter. The Permittee has stated that the Des Bee Dove MRP App. XVI narrative will be updated with these field changes upon approval. Approval of the application for Phase 1 bond release of the 13.88 acre sediment pond and access road and two remote Maple Gulch portals, each 0.01 acres, **is conditionally recommended, based upon receipt of the following updates to the MRP.**

R645-301-880.310, Based upon the February 19, 2009 letter, the revisions to App. XVI will be provided using a C1C2 form and include:

App. XVI App. B will include the original soil lab results on company letterhead, along with the existing spreadsheet that provides a key to correlate laboratory sample ID and sample site ID.

The location of the border between mulching and non-mulching as agreed to in 2006 will be added to the Des Bee Dove Phase 3 reclamation maps in App. XVI.

Section R645-301-224 of App. XVI will be revised to state that the dam embankment material was used as substitute topsoil rather than the *in-situ* soil beneath the subsoil stockpile.



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Section R645-301-243 of App. XVI describes nutrients and amendments to be added based upon laboratory analyses. Section R645-301-243 of App. XVI will be updated to state that no fertilizer was applied, although no fertility parameters were analyzed.

Section R645-301-241 Substitute Topsoil will be updated to report the use of pond embankment material and borrow topsoil on the west side of the pond and pond embankment material on the east side of the pond and part of the subsoil storage area, as described in the February 19, 2009 letter.

TECHNICAL ANALYSIS:

RECLAMATION PLAN

TOPSOIL AND SUBSOIL

Regulatory Reference: 30 CFR Sec. 817.22; R645-301-240.

Analysis:

Redistribution

The requirements for Phase I bond release are outlined in R645-301-880.310. The Rule states that "no bond will be fully released under provisions of this section until reclamation requirements of the Act and the permit are fully met.

As built cross sections were provided for the remote maple gulch portals.

For the sediment pond, the application states that the reclamation basically followed the work outlined in Phase 3, Appendix XVI of the MRP. Ken Fleck signed the C1 form, certifying on behalf of PacifiCorp that the information contained in the application is true and correct, except that the cover letter received February 19, 2009 states that the MRP will be update with five field changes.

Nielson Construction began reclamation of the sediment pond in mid-December 2005 and completed the project, including the access road on January 31, 2006 (Insp. Rpt #876, dated Feb. 22, 2006). The pond was filled with subsoil from the subsoil stockpile. The subsoil is fine textured loam to clay loam, alkaline and sodic (App. B, App. XVI). The surface replacement of topsoil and substitute topsoil was composed of sediments cleared from the pond and selected topsoil and substitute topsoil (as described in Section R645-301-224 of App. XVI), except that as shown on the cross-section, the subsoil stockpile was not over-excavated to remove two feet of additional topsoil from the *in-situ* soil beneath the stockpile. There were four other field changes to the reclamation plan that are discussed in the cover letter dated February 18, 2009.

Differences between the App. XVI plans and as built information were noted by comparison of Mass Balance tables provided on Dwg 500-1 (proposed) and Dwg 500-5A (as built) and cross-sections.

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App. XVI Section R645-301-241 Soil Redistribution, Sediment Pond, describes a final topsoil cover depth of 10 inches composed of A and B horizon materials. App. XVI Section R645-301-224 Substitute Topsoil states that 640 cu yds from a topsoil salvage area will provide 1.5 inches of substitute topsoil cover. The quality of this topsoil salvage area is represented by sample site DBD 505 (0 – 1 foot depth). The subsoil pile would provide an additional 2 inches of substitute topsoil for a total of 3 ½ inches topsoil cover. As Built DWG 200-2A describes a three inch depth of topsoil replacement over the pond area and a 12 inch replacement depth over the subsoil storage area. Section R645-301-241 Substitute Topsoil will be updated to report the use of pond embankment material and borrow topsoil on the west side of the pond and pond embankment material on the east side of the pond and part of the subsoil storage area, as described in the February 19, 2009 letter.

As built Dwg 200-1 shows the locations of soil sampling: the topsoil borrow area (sample DBD 505), the pond sediment (DBD 305 and DBD 405) and the stockpiled subsoil (samples DBD 105 and DBD 205). The plan provides a summary of the laboratory analyses in App. B of App. XVI (incorporated on 9/26/2005). The analyses were run by Intermountain Laboratories and analyses on letterhead were provided with the February 19, 2009 letter. However, the sample ID does not match the sample site ID. The bond release as built updates to App. XVI will include the original lab results on company letterhead, along with the existing spreadsheet which provides a key to the sample identification.

Section R645-301-243 of App. XVI describes nutrients and amendments to be added based upon laboratory analyses. The February 19, 2009 cover letter states that based upon comparison of analyses between the topsoil borrow area (sample DBD 505), the pond sediment (DBD 305 and DBD 405) and the stockpiled subsoil (samples DBD 105 and DBD 205) there was no fertilizer applied. Soils were analyzed only for suitability parameters such as pH, EC and SAR, but not for fertility parameters of nitrogen, phosphorus or potassium. Section R645-301-243 of App. XVI will be updated to state that no fertilizer was applied.

As built Dwg 300-1A provides reclamation area totals. The location of the border between mulching and non-mulching as agreed to in 2006 will be added to the Des Bee Dove Phase 3 reclamation maps in App. XVI.

As built Dwg 200-2A illustrates the average depth of topsoil and subsoil replacement and provides cross section locations for reclamation of the pond and subsoil stockpile location. Plate 500-4A provides the profile and cross-sections for the 4,000 ft. long access road.

During the bond release inspection on December 3, 2008, the soils at the lowest elevation of the reclaimed pond were saturated. A ring of salt encrusted the soil surrounding the low spot. [In 2006, it was noted that a spring was encountered emanating from bedrock at this low spot (see insp. Report 876 2/22/2006).]

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HISTORY

In 2006, phase I bond release applications were approved under Tasks 2411 and 2513 for the following areas:

- The Pumphouse Area. Reclamation was completed in 1999. It covered 1.56 acres.
- Des Bee Dove Phase 1. Reclamation was completed in 2002. It included approximately 4 acres of pre-SMCRA disturbance at the Des Bee Dove Mine: the Little Dove/Beehive pad (2.13 acres), the substation and water storage area (0.75 acres) and the access road down to the Desert pad (0.97 acres).
- Des Bee Dove Phase 2. Reclamation was completed in 2003. It included 22 acres of (mostly) pre-SMCRA disturbance. The Deseret Mine, Tipple and Bathhouse cover about 8.4 acres. Substitute topsoil was reapplied to 5.25 acres of reconstructed fill slopes on the bathhouse pad and in the lower main drainage and at the Deseret portal and access road to the Beehive portal.

In 2007 Phase III bond release was approved to facilitate a post mining land use change to industrial (oil and gas extraction) for 0.9 acres of the 2nd phase of Des Bee Dove Phase 2 reclamation and 1.62 acres of the pumphouse reclamation areas.

Findings:

The information provided does not meet the requirements for Phase I bond release. Prior to approval, the Permittee must provide the following information, in accordance with:

R645-301-880.310, Based upon the February 19, 2009 letter, the revisions to App. XVI will be provided using a C1C2 form and include:

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RECOMMENDATIONS:

An AVS check conducted in conjunction with task 2878 (Trail Mountain mine permit mid-term review) is also pertinent to this PacifiCorps mine.

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